

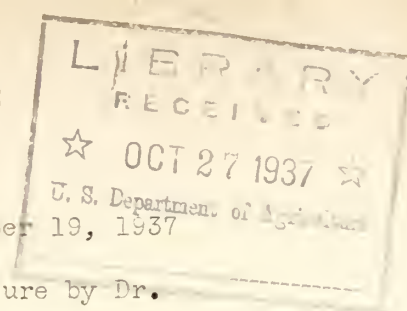
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UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Washington, D. C.

October 19, 1937



Announcement is made of an illustrated lecture by Dr. John Phillips of South Africa on land use problems in South and East Africa, which may be of interest to members of the Department of Agriculture.

The lecture will be held in the Department auditorium from 2:30 to 3:30 on Thursday afternoon, October 21.

Dr. Phillips, who is touring the United States on a Carnegie Cooperative Fellowship, is Professor and Head of the Botanical Department and Director of the Ecological and Veld (Range) Management Research Station, University of Witwatersrand, Johannesburg, Union of South Africa. Dr. Phillips has been a student of problems of land use involving erosion, range and forest problems for more than 15 years, having been Research Officer in charge of the Forest Research Station in South Africa and Deputy Director and Ecologist of Tsetse Fly Research and Reclamation in Tanganyika, East Africa and Director of studies involving soil, vegetation, climate and the results of land occupation upon the deterioration and conservation of natural resources.

Dr. Phillips will discuss these problems with special reference to forest and Veld (Range) problems in South Africa and the methods now being employed to solve problems arising out of land use on this great area.

This lecture is open to interested members of the Department of Agriculture concerned with related problems.

UNITED STATES

DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

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★ JUN 5 - 1936 ★

Washington, D. C.
May 27, 1936.

MEMORANDUM TO SOIL CONSERVATION SERVICE STAFF, ALL DIVISIONS:

I am transmitting to you copies of:

1. Dean C. B. Hutchison's report to the State Station Directors on the conference held in Chicago, May 4 and 5, 1936, between the Committee on Experiment Station Organization and Policy, and representatives of the U. S. Department of Agriculture.

2. A form of Memorandum of Understanding between a State agricultural experiment station and the Soil Conservation Service.

3. The approved procedure to be followed by the Division of Research in the development of a nation-wide cooperative program of research in soil erosion and its control. Reference is made to copies of the basic Act establishing the Soil Conservation Service in the Department of Agriculture, and the Secretary's Memorandum to me on June 6, 1935, which you already have and which should be consulted in a study of these papers. There are also included a copy of a sample project agreement and copies of organization charts to make clear the manner of functioning of the cooperative program in research.

The memorandum of understanding covering the cooperative relationships in research of the Soil Conservation Service with the several States will form the basis for cooperative research involving the Soil Conservation Service in a particular State.

I request all staff members of the Soil Conservation Service to study these documents thoroughly and become familiar not only with the expressed statements of procedure contained in them, but also with the policies on which the procedure as stated is based.

The State Coordinators and the State advisory committees will be counted on to work for effective and friendly cooperation between divisions of the Service engaged in research and in field operations, extension and education in soil conservation in the States.

Heretofore, it will be recalled, it was necessary to advance our operations and related Service activities more rapidly than research; now we are authorized to advance our research activities to their appropriate place among the functions of our Service. This will be accomplished through cooperation with other research bureaus, independent institutions and State agricultural experiment stations. Let me urge every member of the Soil Conservation Service, wherever he may be stationed, to give full support to this work of developing an adequate research program in soil conservation for the United States.

Sincerely yours,

H. H. Bennett

Chief.

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MEMORANDUM OF UNDERSTANDING

between

THE _____ AGRICULTURAL EXPERIMENT STATION

and

THE SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

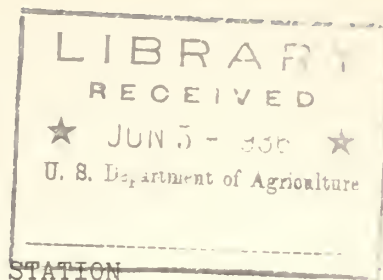
relative to

Research in Soil Erosion and Its Control

The _____ Agricultural Experiment Station and the Soil Conservation Service recognize that cooperation is chiefly a matter of working together to a common end, rather than one of financing, each agency contributing what it can in experience and knowledge of its personnel, to the planning, conduct and interpretation of research and experimentation as a whole, and furnishing such facilities and funds for particular experiments and studies as is practicable. To this end it is agreed that such research as may be mutually agreed upon with reference to the character of soil erosion and methods of its prevention and control undertaken by either agency in the State of _____ will be deemed to be cooperative. Nothing in this broad understanding is to be construed as interfering with the basic responsibilities of either agency, and it is recognized that really successful accomplishment can be obtained only through mutual helpfulness.

This understanding, covering research relations between the _____ Agricultural Experiment Station and the Soil Conservation Service, recognizes a similar memorandum of understanding between the _____ Agricultural Extension Service and the Soil Conservation Service covering cooperative efforts in soil erosion control. These two memoranda of understanding, the one covering extension, operations, and educational relations and the other covering research relations, provide the basis for all cooperative relations of the Soil Conservation Service in the State of _____.

The specific object of this cooperative research is to study in a thoroughly coordinated manner, as between State and Federal workers, the main factors and forces involved in the incidence of soil erosion under general farming conditions, methods of prevention or control and the most economic method of restoring lands already injured to varying degrees by the uncontrolled action of wind or water. These studies will be organized for the present under five general headings, the more detailed outlines of which will be



developed with the various projects as they appear for approval. These fields, bearing upon soil erosion, are listed as follows:

- I. Soil and Water Conservation Studies.
- II. Watershed Studies.
- III. Hydrodynamic Studies.
- IV. Climatic and Physiographic Studies.
- V. Economic and Rural Life Studies.

It is understood that both the _____ Agricultural Experiment Station and the Soil Conservation Service are interested in fundamental research. the Soil Conservation Service being concerned primarily with the results having regional application, and the _____ Agricultural Experiment Station being concerned primarily with results having application within the State.

In the furtherance of cooperative research in the field of soil erosion and its control along the general lines indicated above:

A. The _____ Agricultural
Experiment Station agrees:

1. To designate subject-matter specialists from the staff of the Agricultural Experiment Station for collaborative appointment in the Soil Conservation Service to cooperate with Federal workers where soil erosion research of direct interest to the State is under way.
2. To provide, within the limitations of its budget, workers or graduate students for special phases of the work as they develop, under conditions to be agreed upon at the time such arrangements are consummated.
3. To advise and assist in the selection of technical workers in the Service for duty within the State or the immediate region in which the State is interested.
4. To permit, within the limitations of convenience to the work of its staff, the use of available laboratory and office facilities when the use of these facilities may prove mutually advantageous.

5. To lend counsel and to provide for such technical direction as may be mutually agreed upon relative to the prosecution of the cooperative efforts herein provided for.

B. The Soil Conservation Service agrees:

1. To move forward as rapidly as possible, in cooperation with State workers, in the survey and study of critical areas within the State, in the planning of needed research in soil erosion and in the initiation of this work promptly upon approval by all parties concerned, including the Inter-Bureau Research Committee.
2. To be responsible through the Inter-Bureau Research Committee for the coordination of research covered by this Memorandum with other bureaus of the Department and with other Departments of the Government and with the experiment stations of other States, within the proper limitations of subject matter.
3. To allot funds as provided by Congress for the prosecution of research in the State or in regional areas in which the State is interested, subsequent to the preparation of detailed plans for same and their approval by all parties at interest.
4. To cooperate fully through its Division of Research, or its authorized representatives, with the _____ Agricultural Experiment Station in the selection of trained personnel for the conduct of research and in the development and administration of all phases of the research program.
5. To cooperate with the Director of the _____ Agricultural Experiment Station in placing the results of research obtained under this memorandum in the hands of extension workers as promptly as possible.

C. It is mutually agreed that:

1. The details of the cooperative research projects, coming under this memorandum, shall be planned and executed jointly by the _____
_____ Agricultural Experiment Station and Soil Conservation Service through appropriate subject matter specialists. Copies of all project working plans will be filed with the Director of the _____
_____ Agricultural Experiment Station, with the Directors of other State Agricultural Experiment Stations directly interested in a project of a given agricultural area and with the heads of the cooperating sub-divisions in the major Division of Research, Soil Conservation Service.
2. Either party shall be free to install such equipment as may be needed and otherwise unavailable. Equipment and materials purchased from funds of the United States Department of Agriculture shall remain the property of the United States Department of Agriculture, subject to removal or other disposition upon termination of this agreement. Equipment purchased from State funds shall remain the property of the _____ Agricultural Experiment Station and subject to its disposition.
3. Neither the State of _____ nor the United States is bound by the terms of this Memorandum of Understanding at any time for any funds or services in excess of available appropriations, or beyond the period or periods authorized by existing law.
4. All United States Department of Agriculture funds expended in connection with these investigations shall be disbursed in accordance with the fiscal regulations of the United States Department of Agriculture, and all State funds shall be disbursed according to the fiscal regulations of the _____
_____ Agricultural Experiment Station.
5. The amounts to be expended by the _____
_____ Agricultural Experiment Station, by other State Stations interested in a given regional project, and by the Soil Conservation Service, will be determined in advance by mutual agreement among all parties.

6. Where the availability of land is involved, it may be State-owned, Government-owned, or leased by either agency from public or private sources, with or without option to buy, subject to State and Federal laws and regulations. The details of arrangements under this heading will appear in working plans for individual projects.
7. A complete report on the progress of research by projects shall be prepared each year by the leader or leaders of each cooperative project for review and joint approval by the cooperating agencies, two approved copies to be furnished to the _____ Agricultural Experiment Station, a copy to each of other Agricultural Experiment Stations interested in the studies, and a copy to the head of each Soil Conservation Service sub-division of research interested in a given project.
8. Representatives of the agencies cooperating on any approved project or projects shall meet at least annually for the purpose of reviewing the progress of the work of the previous year and to make recommendations for discontinuation of completed work, for continuation and revisions of incompleting projects and for initiation of new work.
9. Either party to this agreement shall be free to use any of the results obtained in the cooperation in official correspondence, giving due credit to the other agency. It is understood that neither party will publish any results without consulting the other. Publication may be joint or independent as may be agreed upon, always giving due credit to the cooperation and recognizing within proper limits the rights of the individuals doing the work. In case of failure to agree as to manner of publication or interpretation of results, either party may publish data after due notice and submission of the proposed manuscript to the other. In such instances the party publishing the data will give due credit to the cooperation, but will assume full responsibility for any statements on which there is difference of opinion.

10. This Memorandum of Understanding shall take effect upon its approval by the Director of the _____ Agricultural Experiment Station, the Chief of the Soil Conservation Service and the Secretary of Agriculture and shall continue in force until June 30, 1941, unless abrogated by mutual consent of the cooperating parties or terminated by any party hereto by giving written notice to the other parties at least thirty days before June 30, the end of any fiscal year.

11. No member of or delegate to Congress or resident Commissioner, and no officer, agent or employee of the Government, shall be admitted to any share or part of this agreement or to any benefit to arise therefrom and no convict labor shall be employed in carrying out the terms of this agreement.

SIGNED:

(Name)

(Title)

Date: _____

Agricultural Experiment Station:

Director

Date: _____

U. S. Department of Agriculture:

Chief, Soil Conservation Service

Date: _____

APPROVED:

Secretary

Date: _____

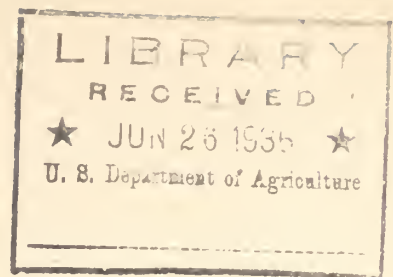
OR

(Title)

Date: _____

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UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



Washington, D. C.
May 29, 1936

MEMORANDUM TO SPECIALISTS IN RESEARCH, REGIONAL CONSERVATORS
AND STATE COORDINATORS, SOIL CONSERVATION SERVICE:

SUBJECT: A PROGRAM OF RESEARCH IN SOIL CONSERVATION.

Procedure to be Followed by the Division of
Research in the Development of a Nation-wide,
Cooperative Program of Research in Soil
Erosion and its Control.

Upon receipt of the Secretary's Memorandum of June 6, 1935, to Mr. H. H. Bennett, Chief of the Soil Conservation Service, defining basic principles to be followed in the formation of organization and policy, the Soil Conservation Service proceeded to create a provisional research organization and to develop certain projects for consideration by the Interbureau Research Committee.

Early in February, the Chief of the Soil Conservation Service asked Dr. J. T. Jardine, then Chief of the Office of Experiment Stations, and now Director of Research, U. S. Department of Agriculture, to lend the Soil Conservation Service a specialist to help in formulating the research program and in establishing cooperative relations with other research agencies concerned with soil conservation. Dr. B. Youngblood was given this assignment. Since February, continued progress has been made in the evolution of the program. For example, projects have been further developed, intra-bureau relations worked out in consultation with State representatives, and a tentative draft prepared of the memorandum of understanding to be entered into by the Soil Conservation Service through its Division of Research, with each of the State Agricultural Experiment Stations. A "Basis of Discussion" was also prepared and submitted to the Experiment Station Directors. Copies were forwarded to the field officers of the Soil Conservation Service for their information.

A proposal came from Dean C. B. Hutchison, Chairman of the Committee on Experiment Station Organization and Policy of the Association of Land Grant Colleges and Universities, for a conference to be held between the members of his Committee and

representatives of the Soil Conservation Service, to consider the proposed memorandum of understanding and related questions pertaining to cooperative relations which might prevail in a nation-wide attack upon the problems of soil conservation. By correspondence with Department officials, Dean Hutchison arranged for such a conference to be held at the Stevens Hotel in Chicago, Illinois, May 4 and 5, 1936. Dean Hutchison considered this conference of such importance that he invited not only the members of his Committee and the administrative officers of the Soil Conservation Service, but also such other Experiment Station Directors and officers of the Department of Agriculture as wished to attend. Such was the interest among those concerned, both in Washington and in the States, that in addition to the Committee, 16 State Agricultural Experiment Station Directors or their representatives and 15 representatives of the U. S. Department of Agriculture attended the conference.

The results of that conference are embodied in the revised memorandum of understanding between a State agricultural experiment station and the Soil Conservation Service relative to research on soil erosion and its control and in Dean Hutchison's memorandum of May 13 addressed to all Experiment Station Directors. It is understood, of course, that the Soil Conservation Service was a party to this conference and agreed to the results. A copy of the revised memorandum of understanding and a copy of Dean Hutchison's memorandum are attached.

CONCLUSIONS REACHED AT THE CHICAGO
CONFERENCE, AFFECTING THE RESEARCH
PROGRAM

1. All research within a State (or such research as may be mutually agreed upon) relative to soil erosion and its control, shall be jointly planned and conducted jointly or in a manner to be mutually agreed upon, by the State Agricultural Experiment Station and the Division of Research, Soil Conservation Service.

2. All cooperative programs and projects of research coming under the memorandum of understanding in research are to be developed by direct negotiations between the Director of the State Agricultural Experiment Station and the Chief of the Division of Research, Soil Conservation Service, or their duly authorized representatives.

3. According to the Secretary's Memorandum of June 6, 1936, and the organic Act creating the Soil Conservation Service in the Department of Agriculture, all research having a direct bearing upon the problems of soil erosion and its prevention and control are the proper function of the Soil Conservation Service, Division of Research; while all other research having an in-

direct bearing upon the problems of soil erosion and its control come within the purview of other bureaus of the U. S. Department of Agriculture. Hence, all research bearing indirectly on soil erosion and its control may be arranged for cooperatively by a memorandum of understanding between the Soil Conservation Service on the one hand and between the other Federal bureau and the State agricultural experiment station on the other. For example, the breeding of plants especially suited to the purposes of erosion control may be arranged for cooperatively through a memorandum of understanding with the Bureau of Plant Industry and the Soil Conservation Service on the one hand and another memorandum of understanding between the Bureau of Plant Industry and the State agricultural experiment station on the other.

4. Cooperation with State research agencies other than the Agricultural Experiment Stations will be arranged for, so far as possible, through the Director of the State Agricultural Experiment Station, e. g., cooperative endeavors with State Planning Boards, Water Boards, State Departments of Conservation, and the like.

5. The memorandum of understanding covering research relations with the State agricultural experiment stations was recognized as coordinate with a similar memorandum entered into by the Division of Cooperative Relations and Planning of the Soil Conservation Service, with the State agricultural extension service. These two memoranda of understanding are further recognized as covering all Soil Conservation Service cooperative relations with each State.

6. The concensus of opinion of the Chicago conference was that the State Advisory Committee "should have no powers in respect to research." The advice of this Committee, however, will be sought in connection with the development of the State soil conservation research program, especially with reference to problems for study. This Committee will, of course, be kept informed of the general progress made in cooperative research. Generally speaking, the Advisory Committee should be helpful indeed in an advisory capacity to both the State Agricultural Experiment Station and the Research Division and to Operations Division of the Soil Conservation Service in the broad relationships of research to extension, operations, education, and in other matters.

7. Based upon the past experience in the Department of Agriculture, the research function of the Service will be kept separate from the administrative function, as set forth in the Secretary's Memorandum of June 6, 1935. This provision in no wise precludes the effective coordination of research extension or operation activities. The function of research is to provide among other things a body of basic information for the use of operation and extension workers in helping farmers and stockmen put erosion control and soil and water conservation measures into practice on their farms and ranches. Furthermore, such basic information is essential to formulation of

national agricultural policies pertaining to land use planning. Accordingly, provision is made for calling Regional Conservators, State Coordinators and the State Extension Service into consultation in the formulation of research programs and in the development of methods of application of results and for keeping such officers informed of the progress of research.

8. In addition to the relations outlined in paragraphs 6 and 7, and as a result of numerous suggestions coming from various parts of the country, both during and since the Chicago conference, the Division of Research has been directed to create a special section, the function of which is to develop cooperative projects with the Division of Operations and Directors of State Experiment Stations concerned for conducting exploratory tests and investigations pertaining to erosion control measures and practices on farms within or without demonstration and work areas of the Soil Conservation Service. This work can be effected by the assignment of personnel and facilities of the Division of Operations to specific projects developed through the Division of Research. These investigations, conducted by the Division of Research chiefly through the Division of Operations and the State Experiment Stations, will yield provisional answers promptly to many questions confronting operations and extension activities in approved, large scale work, and will at the same time be a guide in the selection of problems for thorough study in the research program.

9. Who May Propose Problems for Study?

Of course, any citizen of the United States, layman or scientist, may suggest problems to be considered jointly by the State Agricultural Experiment Station and the Division of Research, Soil Conservation Service. It is to be expected, however, that the greater number of such problems will be proposed by State and Federal research workers, extension workers, administrators, and by State Coordinators, and heads of operations units of the Soil Conservation Service. Such problems may be submitted either through the Director of the State Agricultural Experiment Station or the Chief of the Division of Research, Soil Conservation Service, and the one so receiving them will present them to the other for joint consideration. Doubtless, more problems will be thus suggested for consideration than there will be either funds or trained personnel for study. It will be necessary, therefore, for the Director of the State Agricultural Experiment Station and the Chief of the Division of Research, Soil Conservation Service, or their technical representatives, to analyze the varied problems until those of greatest importance have been selected for study within the funds available.

RELATIONS OF THE DIVISION OF RESEARCH
TO THE DIVISION OF OPERATIONS AND THE
DIVISION OF COOPERATIVE EXTENSION AND
PLANNING, SOIL CONSERVATION SERVICE

The relation between these three divisions will be intimate, cordial and mutually helpful. As previously indicated, the technical

problems immediately confronting the divisions of Operations and Cooperative Extension and Planning, such, for example, as the types and methods of terracing, strip cropping, cropping systems and other significant methods of erosion control practices, may be tested through cooperation with the divisions of Operations on projects approved by the Chief of the Division of Research. For conducting this character of investigation, a special section will be set up in the Division of Research. The head of this Research Section will function as the liaison officer between the Division of Research and the Division of Operations. All studies of this character, conducted by the Division of Research on demonstration areas through assignments of personnel and facilities from the Division of Operations, will be carried out under project agreements regularly developed by the Chief of the Division of Research and the Director of the State Agricultural Experiment Station or their representatives. These studies will thus become a part of the State program of cooperative research in soil erosion and its control. This character of work should make available rather promptly much information urgently needed in this, the early stages, of soil conservation activities over a broad front in the United States.

RELATIONS OF THE DIVISION OF RESEARCH WITH STATE AGRICULTURAL EXPERIMENT STATIONS

Procedure in Joint Planning

After a memorandum of understanding has been signed by the State Agricultural Experiment Station Director, the next step is to evolve a State program of research in soil conservation. From such program, projects will be selected for development to the extent of the personnel and funds available. For the information of those of the Soil Conservation Service staff concerned, a type cooperative project agreement is hereto appended. This project agreement comprises an outline of the project agreed upon and all necessary agreements as to the respective contributions of the cooperating agencies, including facilities, personnel and funds, and the time and method of terminating or renewing these project agreements. In all cases, both State and Federal laws and regulations governing use of research funds will be complied with, of course, by both cooperating agencies. After the project agreement has been approved and it has been determined that funds and facilities are currently available, the project leader will develop a working plan setting forth details of study and experimental procedure.

Cooperative Field Units

Under the relations established by the memorandum of understanding with the State agricultural experiment station directors,

continuing research projects will be set up as certain designated field units, such as the soil erosion laboratories. These laboratories may be owned or possessed either by the Soil Conservation Service or the State Agricultural Experiment Station or jointly by both. The work thereon will be supervised by scientists jointly selected under arrangements mutually agreed to.

Problem Areas

Needless to say, the cooperative program of research in soil erosion and its control in a State will deal with problem areas extending over into other States. For this reason, numerous State agricultural experiment station directors have suggested that inter-State cooperation among the State agricultural experiment stations will be essential in helping the Division of Research of the Soil Conservation Service to correlate the research program of one State with that of another and to round out the nation-wide program of research in soil erosion and its control. This will avoid overlapping or unnecessary duplication of effort and serve to fill in any gaps in the program. In such cases, the State agricultural experiment station directors concerned with the cooperative research of a given problem area will be called into conference for purposes of planning and working out relationships.

Field Research Supervision

As indicated in Dean Hutchison's memorandum, it was mutually agreed at the Chicago conference that the Division of Research of the Soil Conservation Service, would not appoint any "Regional Directors of Research." In view of this action, members of the various divisions of the Soil Conservation Service will be interested to know how the Division of Research will implement its functioning with the State Agricultural Experiment Stations in jointly planning and jointly conducting research in soil erosion and its control in the 48 States of the Union. Manifestly, the Chief of Research can not personally contact every State Agricultural Experiment Station staff in the country concerning all the questions which may arise from time to time pertaining to the planning and conducting of cooperative research. To meet this situation, the Chief of Research will be given the authority to call upon either research specialists or superintendents of field research units, such as the erosion experiment stations or the experimental watersheds, to represent the Division of Research in dealing with both administrative and research questions arising out of relations with a particular State station or group of State stations. Men who may thus be called upon will be designated, and their addresses furnished, and the States in which they are to represent the Division of Research, will be indicated as soon as possible.

RELATION OF THE DIVISION OF RESEARCH
TO OTHER RESEARCH AGENCIES

Other Bureaus of the U. S. Department of Agriculture

The cooperative research relations with other bureaus of the U. S. Department of Agriculture will be developed through memoranda of understanding similar to those entered into with the State agricultural experiment stations. Under these memoranda, specific project agreements will be prepared, providing for cooperative research on particular problems.

Other Federal Departments

Memoranda of Understanding and project agreements may also be entered into with research agencies in other Federal departments. For example, the Soil Conservation Service is now cooperating with the Indian Service of the Department of Interior in a number of projects. A sheep breeding laboratory is jointly operated near Ft. Wingate, New Mexico, by the Bureau of Animal Industry and the Soil Conservation Service, Department of Agriculture, and the Indian Service, Department of the Interior. Similarly, the Soil Conservation Service, is also cooperating with the U. S. Geological Survey and the Bureau of Standards.

Independent Research Agencies

In addition to cooperation with other bureaus of the Department of Agriculture and with other Federal departments, cooperative relations, either formal or informal, will be maintained with independent research institutions, for example, the National Research Council, privately endowed institutions, and the research divisions of some independent universities.

CONCLUSIONS

In the efforts of the U. S. Department of Agriculture to obtain the cooperation of all other research agencies concerned in the task of evolving a sufficiently comprehensive, nation-wide program of research in soil erosion and its control, it is guided by the conviction that the spread of man-made deserts and waste lands arising out of wind and water erosion, is a challenge to the future well-being and permanence of this Nation. The Department believes, therefore, that this matter of soil conservation and the problems confronting it, have risen to the forefront of importance in constructive thinking in this country. It further believes that if the present movement for soil and water conservation in the United States is to prove highly successful, a factual basis must be established by the forces of research. It is hoped that the studies provided for in the proposed program of research in



soil erosion and its control will cover a number of the more impending problems. The problems studied will vary, therefore, all the way from the more fundamental to rather simple tests, experiments and investigations designed to throw light upon practical problems immediately confronting the operations and extension services in their efforts to put into effect soil conservation methods on the farms of the country. Through the processes of research and education in soil conservation, it is hoped to bring the seriousness of soil erosion and its consequences into the economy and life of the American people.

A. H. Bennett
Chief.

For December 26 papers

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

December 22, 1939.

MEMORANDUM FOR MR. H. H. BENNETT,
Chief,
Soil Conservation Service.

Dear Mr. Bennett:

I hereby approve the steps taken by you — as set forth in your memorandum of December 11 with attachments — for getting additional conservation in the programs administered by the Soil Conservation Service.

I note (1) that a field memorandum has been prepared and distributed to your ranking field officers concerning the reorientation of activities in the Service with a view to obtaining more conservation; (2) that a proposed cooperative field agreement has been prepared by the Soil Conservation Service and the Farm Security Administration whereby more technical assistance will be extended to Farm Security Administration clients by Soil Conservation Service personnel, and closer integration and coordination of the programs of the two agencies will be effected with a view to getting additional conservation; (3) that a proposed draft of a memorandum relating to "Developing Classes of Land According to Use Capabilities" has been prepared by your agency but has not yet been considered by the other agencies concerned as proposed in my memorandum of November 25. I would urge, as you suggest, that this be taken up with representatives of the Office of Land Use Coordination, the Bureau of Agricultural Economics, and the Soils Survey Division of the Bureau of Plant Industry and agreement be reached upon it before any distribution is made.

I have had the attachments submitted in your memorandum of December 11 reviewed and a comparison made with the specific proposals set forth in Section II of the Inter-Bureau Coordinating Committee Report of November 22 to the Program Board. This comparison indicates that the following items have not been covered specifically in your memorandum of December 11.

Page 14, Item 1-b

Through group planning and other methods assist larger numbers of individual farmers to facilitate farm conservation plans.

Page 14, Item 1-d.

Use practically all of the technicians' time in formulation of farm conservation plans and in extending technical assistance in the application of these plans.

Page 15, Item 4.

The SCS in cooperation with other agencies will assist during 1940 in developing and trying out in some districts new techniques and procedures which, if found practical, can be extended to all applicable areas.

Page 24, Item 1.

Farm plans of the SCS demonstration areas and of soil conservation districts will be made available to county ACP committees when 1940 ACP allotments are being established. County ACP committees will, insofar as possible under existing regulations and the maintenance of equity of allotments for all farms in the county, establish allotments in line with the acreages provided in the farm plan. If necessary, soil conservation district supervisors will be encouraged to and SCS officials will develop or revise farm plans insofar as needed, in line with the allotments so established.

Farm plans completed by the SCS or in soil conservation districts after ACP allotments are established will provide for acreages of depleting crops in 1940 as nearly equal to the ACP allotments as practicable.

Page 25, Item 7.

The ACP committees, FSA, SCS, and Extension Service personnel in each county will hold a joint meeting to decide what conservation practices should be emphasized in the county in 1940. FSA and SCS will emphasize the inclusion of such practices in their farm plans. The ACP committee will encourage the carrying out of such practices in the preparation of the AAA farm plan. The Extension Service will stress such practices in its educational work. In counties in which Land Use Planning committees are organized and functioning, such committees should participate in the joint meeting and their area classifications should be used as one basis for determining the practices that should be most emphasized in the different areas in the county.

Page 25-A, Item 9.

The SCS in its land use purchases, and the Forest Service in its land purchases, will give careful consideration to any recommendations of the county planning committee as to areas or types of land that should be retired from farming and any priorities pertaining thereto.

In addition to these specific items, I do not find a statement covering Item 3 on Page 15 which relates specifically to group training of personnel of other agencies. Although this is touched upon in the proposed memorandum of agreement between the Farm Security Administration and the Soil Conservation Service, I think it needs to be enlarged upon and developed for the Agricultural Adjustment Administration committeemen as well.

I presume you are now in the process of working out statements on these points not yet covered, and that they will be forwarded to me as soon as completed.

Sincerely yours,

(Signed) H. A. Wallace

Secretary.

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Washington, D. C.

December 11, 1939

MEMORANDUM FOR THE SECRETARY

Dear Mr. Secretary:

In accordance with your memorandum of November 25 re: Ways of Translating Suggestions on Conservation into Effective Action, we gladly submit the following:

1. Field Memorandum SCS #_____ addressed "TO ALL RANKING FIELD OFFICERS" re: Reorientation and Coordination of Service efforts in such Manner as to Attain Effectively a Larger Quantity of Conservation Work. The Service is now in process of mimeographing and distributing this field memorandum.
2. A proposed form for "Field Agreement between the Soil Conservation Service _____ Region and the Farm Security Administration, Region _____, States of _____, with reference to cooperative soil conservation and land management activities on lands operated by individual clients and groups of clients of the Farm Security Administration". This form for field agreement has been formulated cooperatively by representatives of this Service, the Farm Security Administration, and the Solicitor's Office. While this form has not been formally cleared by the two bureaus concerned, it is believed that it is in condition for such clearance. As soon as formal clearance is obtained, each of the two bureaus concerned will forward copies to appropriate field representatives. The form is to be subject to such modifications as the respective SCS Regional Conservator and the FSA Regional Director deem essential. The necessary clearance and distribution will be expedited.
3. A proposed draft of Field Memorandum SCS #348-A addressed "TO ALL RANKING FIELD OFFICERS" re: Developing Classes of Land According to Use Capability".

While this memorandum needs further smoothing, we believe it is substantially in condition for clearance. The representatives from the Office of Land Use Coordination, Bureau of Agricultural Economics and from the Soil Survey Division of the Bureau of Plant Industry have not participated in the consideration of the problem presented in this field memorandum as you suggested. Such participation on this problem, however, will be requested prior to the dissemination of the field memorandum. The clearance and dissemination of this proposed memorandum will be expedited.

We shall, of course, be glad to cooperate in every manner possible.

Sincerely,

(Signed) H. H. Bennett

Chief.

Attachments (3)

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Washington, D. C.

December 9, 1939

FIELD MEMORANDUM SCS # _____

Re: Reorientation and
Coordination of Service
efforts in such Manner as to
Attain Effectively a Larger
Quantity of Conservation Work

TO ALL RANKING FIELD OFFICERS:

The Department is giving particular attention to reorienting and coordinating the action programs which it is administering in order that the greatest possible conservation of resources, compatible with economic circumstances, will result from the work of the Department. The Soil Conservation Service will cooperate to the fullest possible extent with other agencies of the Department toward this objective. Specifically, the Secretary of Agriculture has requested the Service to take the leadership in the following fields:

1. Assisting most effectively the maximum number of soil conservation districts;
2. Furthering, in both operational and overall land planning, the utilization of the "use capability" approach;
3. Coordinating farm plans for farms with which both the FSA and the SCS are working; and
4. Coordinating the work under the Water Facilities Program with that of the Agricultural Conservation and Range Conservation Programs in areas where the Water Facilities Program is being carried forward.

In each of these four specific fields, we ask you to adopt the following principles:

- A. To assist most effectively the maximum number of soil conservation districts:
 1. Use a larger proportion of the Service's resources--personal services, equipment, and planting materials--to assist districts. Where possible, this should be

done through a further reduction in the operating or maintenance costs of established demonstration projects and through further emphasis on simplification of methods for formulating farm conservation plans.

(In connection with these considerations concerning farm conservation plans, particular attention should be given to (a) Memorandum D.C.2-B, dated May 22, 1939, "Re: Recommendations for formulation and use of the Farm Conservation Plan and Revised Form of Farmer-District Cooperative Agreement"; and (b) memorandum dated March 20, 1939, mimeograph No. 3410 with attachments 3410-a and 3410-b, concerning suggestions relating to education and operations work in Districts.)

2. Encourage districts to utilize to the fullest possible extent the complementary assistance and advantages of the Water Facilities Program, the Cooperative Farm Forestry Program, the Land Utilization Program, and the program for "run-off and waterflow retardation and soil erosion prevention" in aid of flood control. This may be accomplished by further emphasis on the establishment of such projects in soil conservation districts, wherever the circumstances justify.
3. Assist soil conservation districts to aid land owners and operators in conservation work by appropriate utilization of labor available through the CCC, WPA, NYA, etc. This may be done through:
 - a. CCC--Further emphasis on the relocation of CCC camps under supervision of the Service in such manner that they may cooperate more effectively with districts;
 - b. WPA--Assisting districts in determining whether they might effectively utilize WPA labor, and if so, in effectively using the labor which may be made available thereunder. (In this connection please refer to Memorandum D.C.14, dated September 29, 1939.)
 - c. NYA--Assisting the districts in determining whether they might effectively utilize NYA labor (probably in such work as line-running, map making, etc.), and in effectively utilizing such labor if it is made available. (We have been informed by NYA representatives that projects involving NYA assistance to soil conservation districts are being formulated and cleared locally.)
4. Assist soil conservation district governing bodies in formulating procedures for establishing priorities for the most effective use of the resources available to their respective districts.

5. Cooperate with the Extension Service and others in assisting districts to establish demonstration farms (if not previously established) in different parts of each district and in bringing such demonstrations to the attention of the owners and operators of land within the district.
 6. Assist districts in helping land owners and operators apply those conservation measures and practices which require technical assistance.
 7. Assist districts to aid owners and operators of lands within districts in the formulation and application of farm plans which will most effectively utilize the Agricultural Conservation and the Range Conservation programs.
 8. Assist district supervisors, individually and in groups, in better acquainting themselves with land conditions in the district and with techniques, programs, and progress through field trips, such as from time to time could be encouraged by work unit heads and district conservationists.
 9. Encourage and assist districts in obtaining the active cooperation of other agencies -- local, State and Federal, in carrying forward district work. To illustrate, assistance through FSA in debt adjustment and further emphasis on rehabilitation needs of farmers residing within districts.
- B. Work of the Service in furtherance of the use capability approach to operational and overall land planning problems will be discussed in a separate memorandum which will be forwarded to Regional Conservators and State Coordinators within a few days.
- C. Coordinating farm plans for farms with which both the FSA and the SCS are working involves the elimination of any conflicts in the FSA and SCS farm plans. While no particular confusion resulting from the provisions of FSA Farm and Home Management Plans and the SCS Farm Conservation plans covering the same farms has been heard of, we must be alert to prevent such an eventuality. The methods used by the Service in formulating plans of conservation operations and the inventory and annual crop acreages in the FSA Farm and Home Management Plans are each sufficiently flexible in their application to fit any set of conditions which may exist on an individual farm or ranch unit.

Through working arrangements with local, State, and Regional FSA representatives, assist the FSA in every way possible in developing sound farm plans for rehabilitation clients, tenant-purchase borrowers and project clients. In addition, Service personnel should feel free to recommend any changes in Service procedure which seem desirable.

- D. To coordinate more completely the work carried on under the Water Facilities Program with the Agricultural Conservation and Range Conservation Programs, personnel responsible for planning and approving "individual" facilities under the Water Facilities Program should obtain from the appropriate Agricultural Conservation Program Committee information on those water facilities, the installation of which may be paid for, in whole or in part, under the Agricultural Conservation or Range Conservation Programs. This information will provide one basis for determining which individual facilities should be financed under the Water Facilities Program.

Service personnel should help land owners and operators formulate water facilities farm plans which take full and practical advantage of payments made under the Agricultural and Range Conservation Programs for installation of certain types of water facilities. (See also the following Water Facilities Board General Memoranda: 8 and 8-a, entitled "Water Facilities Demonstrations"; 9, entitled "AAA Payments for Water Facilities"; and 16, entitled "Provisions for incidental technical assistance in areas authorized for operations".)

It is realized that an insufficient number of areas has been authorized in some states to permit efficient or extensive water facilities operations. The BAE, which is responsible for formulating, presenting and clearing both area proposals and area plans, has agreed to expedite its work and do everything it can to help advance the program. SCS representatives should assist BAE representatives in this connection whenever possible.

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It is appropriate to repeat here some of the basic principles of the Service as set forth in field memorandum SCS #769, entitled "Statement of Objectives and Policies of the Soil Conservation Service."

Basic Objectives--"The basic purpose of the Soil Conservation Service, broadly stated, is to aid in bringing about desirable physical adjustments in land use with a view to bettering human welfare, conserving natural resources, establishing a permanent and balanced agriculture, and reducing the hazards of floods and siltation.

The program of the Service looking to this objective consists of several lines of action differing in method and immediate purpose but having a common ultimate goal of better land use, a better life for people living on the land, and protection of public welfare***".

Advancement of Departmental Aims-- "It is the policy of the Soil Conservation Service to direct and develop all phases of its work with a view to furthering the basic aims of the Department of Agriculture, which include stability of farm income, conservation of basic resources, greater security of tenure, and efficient production and distribution; to cooperate with the general planning agency of the Department and to key its various activities to the overall plans and programs developed by the planning agency; and to cooperate with other bureaus of the Department in order to give unity and coordination to the work of the Department as a whole."

Cooperation-- "It is the policy of the Service to extend fullest possible cooperation and assistance to other agencies, local, State, or Federal, engaged in land use, conservation, and related activities; and to enlist the cooperation and assistance of such agencies in advancing the program for which the Service is responsible."

These principles must be followed thoroughly and expeditiously by all Soil Conservation Service personnel.

(Signed) H. H. Bennett

Chief.

FIELD AGREEMENT BETWEEN THE
SOIL CONSERVATION SERVICE, REGION _____,
AND THE FARM SECURITY ADMINISTRATION, REGION _____,
STATE (S) OF _____

with reference to cooperative soil con-
servation and land management activities
on/lands operated by individual clients
and groups of clients of the Farm Security
Administration.

FOREWORD:

The Farm Security Administration is interested in the rehabilitation of needy farm and ranch families through the development of balanced farm and home management plans, including the extending of supervised credit for leasing land, purchasing livestock and machinery, and defraying farm operating and living expenses.

It is recognized that in a large measure the objective of human rehabilitation must be predicated upon conservative use of the land after the initial task of blocking out economic units has been accomplished. It is true at the same time that destitution and impoverished land often go hand in hand; that a large percentage of the land occupied by prospective Farm Security Administration clients is in a moderate to advanced state of erosion and is in need of application of soil conservation measures and practices in accordance with well-considered farm and ranch conservation plans.

The Soil Conservation Service, as an agency conducting soil and water conservation operations within the area affected by this agreement is concerned with the restoration and maintenance of soil productivity of these lands. The Soil Conservation Service is likewise concerned with acquisition and management of land submarginal for cultivation and aiding needy farm families by leasing such land to them to enable them to operate, as nearly as possible, economic units.

The situation presents an opportunity for integrated action by two agencies of the Department of Agriculture toward the development of a program serving the broad requirements of soil and water conservation and land use management and the special requirements of a people striving for permanent subsistence.

OBJECTIVE:

The development and application of a sound plan of land use and conservation operations for the farms and ranches of Farm Security Administration clients designed:

1. To assist in the stabilization of the lands.
2. To contribute to the sustained welfare of the residents on these lands.
3. To reduce the damage to down-stream and adjacent land, due to silt, run-off, and wind erosion originating on these lands.

AGREEMENT:

In order to accomplish the objective as outlined, the Soil Conservation Service and the Farm Security Administration agree to carry out a program of action as follows:

- A. The Soil Conservation Service will, as far as may be possible, in view of the resources available to it and with due regard to its needs:
 1. Upon request of, and in collaboration with FSA, conduct necessary surveys and make necessary plans of conservation operations covering farms and ranches, for which the operators have applied to FSA for rehabilitation loans or grants and will, in the opinion of the FSA, become FSA clients.
 2. When such farms and ranches are located in soil conservation districts which the Service is assisting, (a) encourage the governing bodies of the districts, when making assistance available, to give priority to farms and ranches of operators who have applied to FSA for rehabilitation loans or grants and who, in the opinion of FSA, will become FSA clients, unless conservation operations on these farms or ranches cannot be fully effective without assistance being first given to other farms or ranches, (b) at the request of the districts and FSA assist the districts in formulating necessary plans of conservation operations covering such farms or ranches, and (c) encourage the districts to use, as far as possible, the resources available to them, including technical assistance, equipment, materials, and labor, in helping these operators to apply such farm or ranch conservation plans.
 3. For farms and ranches located within approved SCS projects or work areas, extend, in addition to

technical services, other assistance when needed, available, and practicable. Such assistance may include labor, technical assistance, materials, and equipment required in carrying out the plans as described and made a part of a SCS cooperative agreement.

4. As a rule, extend its assistance to farmers and ranchers outside of approved SCS projects, work areas, or districts which SCS is assisting, only if their farms or ranches lie in close proximity to such projects, work areas, or districts. SCS will make such assistance available to the extent that the Regional Conservator, or his designee, deems SCS to be in position to do so. As many as practicable of the clients should be cooperators in conducting extension--soil conservation demonstrations.
5. In leasing lands managed by SCS, SCS will give preference to FSA clients and other low-income farm families residing in the vicinity to enable them to operate, as nearly as possible, economic units. When such lands are located within the exterior boundaries of a soil conservation district, which SCS is assisting, SCS may lease or make otherwise available such lands to the district and encourage the district to lease or make otherwise available parts of such lands to FSA clients and other low-income farm families residing in the vicinity to enable them to operate as nearly as possible economic units.
6. Assist in acquainting FSA County Supervisors as much as possible with the most practicable conservation measures applicable to their areas.

B. The Farm Security Administration will:

1. Through the Regional Director, or State Director if designated by the Regional Director, or any other designee of the Regional Director, inform the Regional Conservator of SCS, or the State Coordinator if designated by the Regional Conservator, or any other designee of the Regional Conservator, of all applications for FSA loans which are likely to be granted and involve land on which SCS assistance is desired.
2. If SCS renders assistance, require that the FSA Farm and Home Management Plan, upon the basis of which the loan to the client is approved, include a Plan of Conservation Operations, or in

the case of a farm or ranch located within a soil conservation district which SCS is assisting, a Farm Conservation Plan.

3. Give special consideration to the debt adjustment needs of those clients and prospective clients for whom SCS prepares a plan of conservation operations and will make its debt adjustment services available to the soil conservation districts which SCS is assisting as an aid to effectuating their work.
4. As far as practicable, give special attention to the rural rehabilitation needs of farmers residing within soil conservation districts which SCS is assisting.

C. It is mutually understood that:

1. In cases where FSA is guiding the operations of a client under a Farm and Home Management Plan including a plan of conservation operations, which covers a farm or ranch located outside of an approved SCS project, work area, or soil conservation district which the SCS is assisting, it will be the responsibility of FSA to check the client's compliance with such Farm and Home Management Plan. In cases where FSA is guiding the operations of a client under a Farm and Home Management plan including a plan of conservation operations, which covers a farm or ranch located within an approved SCS project or work area, SCS will continue to check the client's compliance with the plan of conservation operations as included in the Farm and Home Management Plan, and will notify FSA of any substantial failure to comply on the part of the client. In cases where FSA is guiding the operations of a client under a Farm and Home Management Plan including a farm conservation plan, which covers a farm or ranch located within a soil conservation district receiving SCS assistance, SCS will encourage the governing body of the district to check the client's compliance with the farm conservation plan as included in the Farm and Home Management Plan and to notify FSA of any substantial failure on the part of the client to comply with the farm conservation plan.
2. That, through assistance in leasing or otherwise, joint endeavors will be made to assist FSA clients or other low-income farm families in obtaining additional acreage resulting to the fullest extent possible in economic operating units, which will promote the clients' rehabilitation and proper use of land along the pattern

of the Farm Unit Reorganization Program conducted in the Southern Great Plains.

3. This field agreement shall become effective when approved by the Regional Conservator of SCS and the Regional Director of FSA, and shall continue in effect until 30 days after written notice of a desire to terminate it is served by either of the parties hereto on the other. Amendment to this agreement may be made by mutual consent of the parties hereto.

Regional Conservator,
Soil Conservation Service.

Date

Regional Director,
Farm Security Administration.

Date

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

FIELD MEMORANDUM #SCS-848-A

RE: Developing Classes of
Land According to Use
Capability.

TO ALL RANKING FIELD OFFICERS:

A determined drive is being made to get more conservation on the land. The Service must not only increase the effectiveness of its own programs, but also cooperate and assist other agencies in their efforts to obtain more conservation. Speeding up the job of conserving land in this country is dependent on the rapidity with which people learn to appreciate that preservation of the land resources is necessary and vital to their permanent welfare. The wide-spread practice of using land for purposes for which it is not suited or in a manner to which it is not adapted will not be corrected until the principles of proper land management and the consequences of mismanagement are understood and clearly impressed on land users in a simple and concise manner.

The rate of obtaining conservation on the land can be increased by employing maps showing classes of land according to use capability together with tables showing the practices, measures and treatments applicable to each class in the educational, planning and execution phases of action programs. Classifying land according to its use capability simplifies the complex technic and science of agriculture involved in land conservation by grouping the various physical factors basic to sound land use and proper management into a few simple classes. These classes are defined in practical terms that are easily understood. They indicate the most intensive utilization that is consistent with the preservation of the soil and its plant cover. The classes are developed by interpreting the physical factors including the soil, slope, kind and degree of erosion and climatic environment in terms of the practices, measures and soil treatments applicable to each combination of factors found to exist on the land.

Arrangements are to be made for the grouping of the physical factors into land use capability classes as soon as the inventory of the physical factors in any area become available. They are to

be readily reviewed. All agriculturalists including farmers, technicians and scientists who are available and can furnish technical knowledge or practical experience applicable to the conditions in the area should be requested to assist in the development of the classes. Representatives of Agricultural Experiment Stations, Extension Services including County Agents, Federal Agencies, District Supervisors, County Land Use Planning Committees and local farmers have a wealth of information on the subject and it is particularly important that they assist and cooperate in working out the classes. Crop and farm management specialists, agricultural engineers, foresters, biologists, soil scientists, conservationists and economists should participate in all cases including range management technicians in the grazing areas. Other specialists are important in certain areas, such as hydrologists and irrigation engineers in areas where water is a limiting factor in land use. Preliminary to the development of the classes a search should be made of the research and demonstration projects, conducted or applicable to the area, including any surveys and other data having a bearing on its physical conditions.

Distinct steps in the development of classes of land according to use capability and an accompanying chart showing the practices, measures and treatments applicable to the classes are as follows:

1. List the physical data for the various combinations of soil, slope, erosion and climatic environment.
2. Consider the physical combinations in terms of the practices, measures and treatments applicable for the permanent maintenance of the land under most intensive use. Separate that land which is suitable for cultivation (Classes I, II and III), from that which is not suitable.
3. (a) The land that can be cultivated safely with the production of moderate to high yield of the adopted crops without special practices should be placed in Class I.

(b) Land requiring special practices of simple nature in addition to those commonly used to maintain it permanently with the production of moderate to high yields, should be placed in Class II.

(c) Land requiring more complex or intensive practices than those of Class II should be placed in Class III.

(d) Land which can not be regularly or continuously cultivated but which may be used for close growing crops with occasional cultivation should be placed in Class IV.

4. Similar procedure to that described under 3 should be developed for classifying range and forest lands not capable of cultivation.
5. The classes may be sub-divided if the conditions within a class require practices, measures and treatments significantly different. Sub-division of the classes is to be discouraged for the sake of simplicity.
6. Prepare a chart with the classes arranged on the left. List the physical conditions, soil, slope and erosion delineations, included in each class in a vertical column opposite each class. Continue with separate columns summarizing the recommendations for cropping systems, practices, measures and soil treatments for each class.

Since it is not always feasible or necessary that land be put to its most intensive use the recommendations necessary to maintain it safely when used less intensively should be indicated. That is, when land capable of use for intensive cultivation is used as hay or grass land or is to remain in forest land, the practices necessary to maintain it safely as hay, grass or forest land should be indicated. However, care should be observed in placing this information on the chart so as not to be confusing with that recommended for the most intensive use.

When properly completed the definitions of each class of land according to use capability together with the recommendations for the practices, measures and treatments of each class will furnish the necessary physical information to serve as a definite basis for developing good land use and conservation. Upon approval of the definitions and recommendations for each class of land the soil technician should indicate on the field map the class of land for each delineation with numerals. The map may then be duplicated and colored in accordance with the following key: Class I - Green, Class II - Yellow, Class III - Red, Class IV - Blue.

Tentative definitions and colors may be used in the field for classes of land not suitable for cultivation until agreement is reached on standards to be followed. The colored maps and accompanying outlines showing recommendations for the practices, measures and soil treatments applicable to each class should then be made available at appropriate field offices to all agencies interested in developing conservation on the land or improving the welfare of the people dependent on it. Maps, charts and reports for the areas completed will be multilithed and published as rapidly as possible in consideration of the personnel and funds available therefor.

It must be understood that classes of land according to use capability are determined on the basis of the physical characteristics of the land including its climatic environment at the time of mapping. Therefore, in developing plans for land conservation this information serves only as a guide from the physical standpoint. The preferences of the farm operators as well as the economic advisability of any system of cropping or any practice recommended must be taken into account before completing farm conservation plans. Consideration is given to the production consumption and sale of adapted crops of the area in the development of land use capability classes. However, only the broad economic aspect of supply and demand need be known. Experience over a long period of time will in many instances supply this information but is not infallible. Seasonal or year to year variations in market price, accessibility to market, availability of labor, machinery, etc., and other economic conditions local to an individual unit even though they govern the profitability of the enterprise are not considered.

In addition to the policy stated in Field Memorandum #SCS-848, that steps should be taken immediately to develop land use capability classes and recommendations for each class in all planning activities of the Service, this procedure is to be followed for all areas where basic field surveys have been completed. Maps and tables of recommendations for these areas should be made available as rapidly as possible and completed before the end of this fiscal year. Also, land use capability classes should be defined and the recommendations for each class formulated in all areas where the physical inventory has progressed to the point of identifying the major variations in the physical conditions of the area; such as, individual farm or small watershed areas within the Soil Conservation District, CCC Camp area, Water Facility Projects, etc. Colored maps showing the classes of land should be developed and made available in all of these areas as the individual field surveys are completed.

Classes of land according to use capability and recommendations for each class are to be made available for general planning use in all areas where there is partial information of the nature and kind of existing physical conditions and sufficient knowledge of the practices, measures and treatments adapted for these conditions. For example, where one inch to the mile soil surveys have been completed and general physical conditions of the land are somewhat uniform, specific topographic, erosion or climatic conditions may be described with sufficient detail so that with the development of the recommendations these maps may be used for general planning purposes. By interpolation to uniform areas with similar characteristics some information can be made available for most all areas that have been covered with field surveys. Extending land use capability classes in this manner will require close cooperation with the State Colleges and the Soil Survey, Bureau of Plant Industry. Some reconnaissance surveys may also be used in this manner. A thorough review of existing physical survey information should be made in cooperation with

other agencies and the plan of developing classes of land according to use capability and recommendations therefor carried as far as possible for areas where partial information is available. The work, when properly cleared as described above, should be made available ~~on maps~~ with attached recommendations to all interested agencies.

Chief

